DOCUMENT RESUME

ED 304 240 RC 016 832

TITLE	Community Action for Computer Equity.
INSTITUTION	Playing To Win, Inc., New York, NY.
PUB DATE	85
NOTE	13p.
AVAILABLE FROM	Playing To Win, Inc., 1449 Lexington Ave., New York, NY 10128 (1-9 copies, $3.00 each, 10 copies, $25.00).
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Access to Education; *Activism; *Community Action; Community Development; *Community Education; Computer Literacy; *Educational Discrimination; Elementary Secondary Education; *Equal Education; Microcomputers; School Community Relationship
IDENTIFIERS	*Computer Equity

ABSTRACT

Computer equity is the equal opportunity for each individual to use a computer and learn the same subjects at the same level. Every community has some aspect of computer inequity, be it based on gender, income level, race, age, academic achievement, geography, or subject matter. The community activist who wants to promote equal access to computers can begin by collecting evidence of computer inequities and predictions of the importance of technology in present and future job markets. The next steps involve taking the evidence to potentially concerned people in the community, and forming a committee to serve as voice and clearinghouse for the issue. Committee projects could focus on fund raising, teacher training, school curriculum changes, development of computer coordinator networks with other schools and communities, collecting information on software appropriate for schools, staging a local computer fair with the accent on equity and ease of use, and increasing community access to computers and home use. The tip sheet includes questions to consider when seeking evidence of local computer inequity, suggestions for implementing each step of the campaign, and a list of major fact resources. (SV)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED304240

PLAYING TO WIN INC

FEB 1988
RECEIVED
ERIC/CRESS

COMMUNITY ACTION FOR COMPUTER EQUITY

What is Computer Equity?

In the ideal educational environment, each individual would have the same opportunities to use a computer, to learn the same subjects at the same level, no matter their sex, income, race, age, geographic or social position.

But today's world is far from ideal. You do not have to look far to spot computer inequities. They are based on gender, school and student income level, race, age, ability and academic achievement, geography, and subject matter. It's a sure bet that every community has some aspect of computer inequity.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
Antonia Stone
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

What can you do?

YOU CAN COLLECT EVIDENCE OF INEQUITY

You will need evidence to convince others, and to get publicity and fundraising. Begin by collecting national and local evidence of computer equity problems, including predictions of the importance of technology in the present and future job market. Here are some routes:

National.

There is mounting evidence of computer inequity on a nationwide level. You can use these facts and resources, and find many more of your own.

- o) In 1984, the nation's 12,000 wealthiest school districts were four times more likely to have access to computers for instructional purposes than the 12,000 poorest schools. [Minnesota's Center for Social Research, using data from a U.S. Department of Education evaluation.]

- o) Nearly 70% of the nation's wealthy schools had microcomputers in 1984; almost 60% of the poor schools did not. [Same study.]

RC016832

BEST COPY AVAILABLE

- o) Predominantly white schools have twice as many computers as minority schools. [John Hopkins study, 1983]

- o) Senator Frank Lautenberg (D-NJ) and Representative Timothy Wirth (D-Colo) introduced proposals into the House and Senate calling for national action to develop computer education programs and to counter computer inequities. As Lautenberg says, "The concept of computer literacy defines a new type of illiteracy, and the potentials for new and distressing divisions in our society. In an age that demands literacy, a school without a computer is like a school without a library."

You may also want to include evidence which stresses the importance and effectiveness of computer education and training.

- o) In the next decade, at least 8 out of 10 adults will need to use a computer to function in their jobs. [The Intelligent Schoolhouse, 1984]

- o) However, in 1981-2 only 1 in 8 students used a computer over the school year. [Department of Education's National Center for Education Statisitics]

- o) Computer-assisted instruction has repeatedly been shown to raise student achievement -- to improve retention and to lead to faster learning than traditional teaching alone. [J.Kulik, Vinsonhaler and Bass, the Educational Testing Service, and others.]

Following are some major resources to help you find more facts:

- o) The Intelligent Schoolhouse: Readings on Computers & Learning, edited by Dale Peterson; Reston Publishing Company, Inc.; Reston, VA, 1984.

- o) Electronic Learning, the November/December 1981 issue, pp. 56-59, 84, "EL's First Annual Survey on State Governments and the New Technology" and the February 1985 issue, pp. 33-37, "Sorting Out the Equity Issues."

- o) Teaching, Learning, Computing, January 1984 issue, pp. 50-56, "Rich School, Poor School."

- o) The Computing Teacher, April 1984 issue. The whole issue is devoted to the computer equity issue.

- o) Studies by the National Center for Education Statitistics, U.S. Department of Education.

- o) Science March 18, 1977 issue. Entire issue is devoted to electronics.

- o) Commission on Instructional Technology's "To Improve Learning: A Report to the President and the Congress of the United States," Washington: U.S. Government Printing Office, 1970.

- o) National Science Foundation studies, including "Technology in Science Education: The Next Ten Years," NSF (#SE 79-57); "The Five Year Outlook: Problems, Opportunities, and Constraints in Science and Technology."

- o) Computers in the Schools: The New Frontier, put out by the Community Service Society of New York, July 1984. (105 East 22nd Street, New York, NY, 10010).

- o) Studies by James A. Kukik et al. on the effectiveness of computer educational use.

- o) For recent articles and studies, use the Public Affairs Information Service Bulletin (PAIS) index, the Social Sciences Index, and the Reader's Guide to Periodical Literature -- all in your library. These reference books list recent periodicals by subject, author, and title. Check under the listings "microcomputers," "computer-assisted instruction," "computers," and "education."

Local. As Leo Durocher once said, "You can observe a lot just by looking."

- >> Visit schools and computer stores. Who do you see using and buying computers?

- >> Attend a computer trade show and assess the other people there from a minority and sex point of view.

SCHOOLS:

Because such a great emphasis is put on having future generations prepared for a technological world it is important to look closely at the schools. You may want the answers to these questions:

- ?? Which schools in the district have computers and which do not? Why?

?? Within schools, who uses the computers? Is computer use and education built into the school curriculum or are the computers available just on a drop-in basis? If computers are attached only to certain courses and/or are available on a drop-in basis, look carefully at usage patterns. You are likely to see more boys than girls, more sciences than humanities, and more "overachiever" students than those who need extra help or are in the middle.

?? How are the computers being used? Are they used merely as a way to enforce basic skills -- through drill and practice -- or are they presented as tools for learning --using word processing, programming, and other computer utilities?

?? What is the level of computer training for school teachers? How many of your teachers are technophobes themselves? How does level of training vary across grade level or course subject?

?? What is the status of the schools' software collection? What types and quality do they have? Are they taking full advantage of software previewing, public domain software, etc?

?? Are computers used in all subjects? If not, which ones are left out, and why? Is integration of computers left up to individual teachers? If so, what patterns of use emerge?

?? Are there times during the school day when the computers are idle? When, why, what is the pattern?

?? How is voluntary access to computers determined? First come, first serve? Academic requirements (e.g. math background)? Open to the best students or the students who finish their schoolwork first? By computer experience?

COMMUNITY ACCESS AND HOME USE:

?? Are there any computers available for community use? For free? For how much?

?? Are there courses available either through schools, computer stores, local organizations? For free, or at a cost? Does the cost become a barrier to the poor?

?? Find out if people are losing jobs, or not getting them, because of inadequate computer training. Investigate any job training programs there may be

in your area -- do these programs incorporate computer training? If so, at what level?

?? Try to get a handle on home computer use in your area. Find out through schools how many students have computers at home, and if so, who in the family uses them. As teachers you know if they notice any difference in learning rates between those students with and those without home computers.

YOU CAN MAKE OTHERS AWARE

Take this evidence to the potentially concerned members of the community. If the community is not committed, we assure you that any solution will be short-lived.

>> Contact the local media to share your findings and stress the importance of computer equity issues. Provide information and ideas on possible equity issue stories. Write to newspapers and radio stations (remember that some of the people you're addressing may not be able to read).

>> Take your findings and concerns to other community groups to solicit their ideas and assistance.

>> Ask business and/or community organizations to invite you to talk about computer equity issues. Urge them to incorporate computers into their existing educational programs.

>> Write to the school board and the PTA/O about computer use in schools.

>> Hold a community meeting to generate public discussion of the issues.

HINTS: Generating community interest, no matter how compelling the issue, can be tricky. Community interest tends to snowball -- it's collecting that first solid bit that is the most important.

1. Don't jump the gun. Don't go to officials or the media without compelling data and evidence that you know what you are talking about.

2. Find some key players early on -- people rooted and well-connected in the community who are committed to working on the issue.

3. Don't hold a community meeting until you have a significant -- or influential -- number of people interested in the issue. Nothing kills an issue faster than an unattended meeting. (Hold the meeting in a small room so that even if the minimum number of people expected actually attend the room will be full. The best thing that could happen is you will have to move to a bigger room.)

YOU CAN FORM A COMMITTEE

You will want to form an official Computer Equity Committee to serve as a voice piece and a clearinghouse for the issue. A committee will make your job easier, and it will substantially increase your project's staying power.

In Schools:

If you are working only within schools, the school computer equity committee should include:

- o administration
- o teachers of all subjects and grades
- o representatives from school district board
- o parent representatives
- o a student committee (make sure there are girls on that committee)

For Community:

For any action involving the community as a whole, though, a community computer equity committee should include:

- o school administration/board representatives
- o parents or PTA members
- o students (again, include girls)
- o community leaders or staff from community service agencies and church organizations
- o local public housing staff or representatives
- o librarians
- o representative from office of local politician
- o representatives from local business and industry
- o people from any local computer industry or local computer stores
- o representatives of local computer user groups or others who can provide technical expertise
- o media representative -- press or television/radio

If your committee has representatives from the groups listed above, it will also be a valuable network for future projects.

YOU CAN TAKE POSITIVE ACTION

Although some projects listed here can be tackled by one person, most will benefit from attention and planning by a committee.

Within Schools:

RAISE MONEY

>> Work with parent and school groups to raise money for computers, targeting on those schools which have none. The Houston Independent School District initiated "Technology Matching Funds," a project through which the district will match any amount of funds that schools, PTAs or PTOs raise for computers. This approach gets the school district involved in the process while also encouraging parents to contribute. It also has the added benefit of inducing school boards to reexamine their computer budgeting. Encourage your school district to initiate such a challenge.

>> Create a business/school partnership in which businesses will match funds raised by schools and parents (see above) or offer assistance in return for work study programs involving computer students. Impress upon businesses that they have a stake in the education of the area youth. Computer businesses in particular should have an investment in the technological training of local students since among other things these students represent a future consumer market.

COORDINATING NETWORK

>> Encourage schools with computers to establish a computer coordinator position. Have computer coordinators in various schools keep in touch with each other.

>> Develop a program through which computer coordinators share information on hardware and software and plan purchases together.

>> Write to your State Department of Education's Computer Education Coordinator (every state has one) and find out what opportunities and materials are available through that office. Some school districts also have their own Computer Education Coordinator -- ask your school superintendent's office if your district has one.

TEACHER TRAINING

If computers in your school are the exclusive province of a "computer teacher," or are being used exclusively in the math department, then the problem may be simply one of teacher training. The other teachers may not be aware of or may not be trained in the ways in which computers can be used for their disciplines.

>> Research the availability of computer workshops and in-service for teachers. There may be local sources that teachers are unaware of. Try

- o science museums
- o Y's
- o community colleges

>> Write your state's Computer Education Coordinator and/or Sex Equity Coordinator (both in care of the state department of education) for more information. Every state has one. Some states (Vermont, for example) offer free in-service workshops to schools. Work with local parent groups and schools to raise funds for teacher training.

>> Promote in-school computer workshops where trained teachers can share their expertise with others.

>> Encourage your school to sponsor workshops in specialized areas (e.g., teaching writing with a word processor).

>> Insist that any workshops you or your committee sponsor include discussion of equity issues and strategies to prevent bias in computer education or access. The Neuter Computer (at press) from the Women's Action Alliance (NYC) lists over a hundred specific strategies for avoiding sex imbalance in computer education.

>> With your committee, stage a fundraising drive to support computer education and training for teachers.

>> Persuade your local college or university to make computer use a requirement in their teacher education programs.

CURRICULUM CHANGES

Working with school representatives on your equity committee is the most politic way to accomplish curriculum change. Effecting such changes from outside the school requires great sensitivity as well as expertise, and persistence. Yet there

is evidence that the way computers are used in a school affects who uses them, and if there is documented (by you) evidence of inequity of use in your school, you may have to tackle curriculum change.

The object of this change should be the integration of the computer as a multidisciplinary tool in a variety of curricular areas.

- o Word processing for creative and report writing.
- o Data bases in science, social studies, and home economics.
- o Spreadsheets in math, science and physical education.
- o Graphics software in language arts, social studies, science.
- o Student programming in any subject area.

SOFTWARE

Besides stressing the use of these versatile computer tools, you can make teachers aware of new and exciting software in their special areas.

>> Read educational computing magazines and clip reviews of software that sounds exciting for use in a social studies class, for example, and send the review with a note to that teacher.

>> Similarly, create a list of some of the more interesting public domain software that you come across. Alert teachers or school computer coordinators and offer to help them collect the software.

>> Again, through your committee, work with parent and school groups to raise funds for improved software. See Playing to Win's guide to Selecting Hardware and Software for information on choosing the best software.

>> As a possible long-shot, ask private schools, universities, and local businesses about their software (and hardware) turnover. These institutions, working with larger budgets, may be upgrading their systems relatively frequently, leaving them with little-used less sophisticated programs. While you do not want to pick up the "undesirables," you may be able to arrange to have some of these older systems sent your way. One major university, for example, after upgrading its data base software, gave its old excellent but less powerful data base programs to a local high school.

Remember that nothing will happen over night and that you may be rewarded for your efforts by being labeled a meddler. But if your evidence is clear and your tolerance of frustration is high, your persistence can improve the quality of computer use and thus broaden opportunities for involvement of all.

Community Access and Home Use

>> Develop a program to lend school computers to parents during weekends and summer months. The Houston Independent School System has successfully initiated this program which signs computers out to parents who have taken a short introductory course. (See also Playing to Win's guide to Planning Community Computer Programs.)

>> Create a business/school partnership for parent purchases of computers. Another component of Houston's equal access approach is a program through which parents can get a discount on compurters. Get your school district and local computer salespeople committed to working towards such a program.

>> Develop a software loan program so that parents can try out software which the school uses.

>> Work with the schools to create a list for parents and the community of hardware and software with comments, price ranges, and recommendations.

>> Persuade local community colleges and/or computer stores to provide workshops and courses in computer use. It is quite common for stores to offer these classes for a fee.

>> If courses already do exist, see what you can do about expanding their use. You may need to encourage them to offer less operational courses and more introduction to word processing or programming workshops. Stores and schools may need your committee's encouragement and help before they will include other types of programs.

>> Provide a list of existing courses and workshops to the public; help schools and computer stores to advertise their courses.

>> Get local users groups involved in the campaign. These family "hackers" may provide a wealth of untapped information. You can often find these "users" through computer bulletin boards at schools and libraries. These members may be convinced to

stage a series of round-robin computer evenings in which each family describes how it uses its computer, what have been the frustrations, what the rewards.

>> Stage a local computer fair with the accent on equity and ease of use rather than on the usual glossy hi-tech complex (and expensive) computers that make people feel they'll never understand or be able to use them. Ask local industries and schools to loan hardware and software. Have local computer users -- from professionals to children -- give small demonstrations. If you have to charge admission, make sure you distribute complementary tickets through local service agencies so people who can't afford it can come too. A successful fair like this could go far in changing people's attitudes about the applicability of computers to their own lives.

>> Although a computer fair or a committee alone may not dramatically alter the pattern of home computer purchases, they can make a change. Through them poorer families may become aware that they can afford a home computer which can serve them quite well, and that computers are not limited to te $3000 models they so often see advertised. At the Playing to Win Computer Center in East Harlem, one parent thanked the Center for helping her to decide that she would buy a computer instead of a video game machine for the family.

ONE FINAL WORD

No matter what happens, don't be discouraged. No one person or organization can change a community's attitudes, overhaul their educational philosophy or redistribute income overnight, if at all. Instead, sort through the issues and concentrate on one aspect of your community's situation. And remember, Playing to Win is here to help in any way that we can.

PLAYING TO WIN

Playing to Win is a non-profit corporation dedicated to promoting computer equity -- equal access to computer education and use for everyone, regardless of age, race, social or economic condition.

Playing to Win is exempt from federal income tax under Section 501(c)3 of the Internal Revenue code. All donations are tax-deductible.

Currently, six tipsheets on various aspects of community action for computer equity are available:

A. Community Action for Computer Equity ($3.00)
B. Starting Community Computer Programs ($3.00)
C. Finding Money for Computer Programs ($3.00)
D. Selecting Hardware and Software ($2.00)
E. Staffing Computer Programs: Paid and Volunteer Workers ($2.00)
F. Security and Insurance Issues in Informal Settings ($2.00)

The set of six tipsheets is available at a discount price of $12.00. You are free to duplicate and distribute additional copies, but if this is your intention, please include a donation.

Playing to Win, Inc.
106 East 85th Street
New York, NY 10028
(212) 650-0229

August 1985